RCA AMATEUR RADIO CLUB

INDIANAPOLIS, INDIANA

JANUARY 2019 MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE
TUESDAY, JANUARY 8th, 6:30 PM AT
SQUEALERS, 5899 E. 86th STREET, INDIANAPOLIS, IN

RCA ARC NEWS

Summary of the December meeting – Thanks to all who attended the 11-December meeting. Jim, K9RU, announced that we are still looking for donations of items to be sold at the Indy Hamfest in July. We still have coax (Belden 89913) and N-connectors from last year if anyone needs some. No repeater work has been done in the past month. A couple of projects are waiting to be done. Field Day next year will again be at the Victor Conversation Club, same place as this year. The Club's insurance has been paid for another year. K9RU reminded us of upcoming contests. Reservations were made for next years' Club meetings at Squealers.

AMATEUR RADIO LICENSE TEST SESSION –

Time: **Saturday, January 12, 2019, 12:00 pm** (Walk-ins allowed)
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
Indianapolis, IN 46254-2407
Contact: **Jim Rinehart, k9ru@arrl.net, 317 721-1458**

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Jan 05-06	ARRL RTTY Roundup http://www.arrl.org/rtty-roundup
Jan 19-21	ARRL VHF Contest http://www.arrl.org/january-vhf
Jan 26-27	WINTER FIELD DAY https://www.winterfieldday.com/rules
Feb 09	Hendricks County Annual Hamfest, Danville, IN http://hcars.org/
May 05	Indy Mini Marathon (Not too early to sign up to help - N9FEB@comcast.net)
May 05	Indiana QSO Party http://www.hdxcc.org/inqp/
May 17-19	Hamvention, Green County Fairgrounds, Xenia, OH http://www.hamvention.org/
May 25	500 Festival Parade
June 22-23	Field Day
July 12-13	Indianapolis Hamfest, Marion County Fairgrounds, http://www.indyhamfest.com/

For More Contests Information: http://www.contestcalendar.com/
Opportunities for public service: http://indyhams.org/

FCC OUTLINES IMPACT ON ITS OPERATIONS OF POTENTIAL FUNDING LAPSE

The FCC said in a January 2 Public Notice that in the event of a continued partial lapse in federal government funding, it will suspend “most operations” at mid-day on Thursday, January 3.

Some systems that have gone dark in prior government shutdowns will remain operational this time, however. That includes the FCC website, although it will not be updated except for matters related to spectrum auction activities and those necessary for the protection of life and property. until normal operations resume. The FCC *Daily Digest* will continue to appear.

The Electronic Comment Filing System (ECFS), the Universal Licensing System (ULS), the Electronic Document Management System (EDOCS), and the Commission Online Registration System (CORES) will remain available, but no support will be provided except that necessary for spectrum auction activity.

Processing of Amateur Radio applications will come to a halt, however, said ARRL Volunteer Examiner Coordinator (VEC) Assistant Manager Amanda Grimaldi, N1NHL.

Also down will be the Consumer Complaint Center and the Experimental Licensing System, among several others

Still available will be the Network Outage Reporting System (NORS), the Disaster Information Reporting System (DIRS), the Public Safety Support Center (PSSC), the Licensing Management System (LMS), the Consolidated Database System (CDBS), the Auctions Public Reporting System (PRS), the Auction Application System, and the Auction Bidding System.

“All other Commission electronic filing and database systems will be unavailable to the public until normal agency operations resume,” the FCC said.

ARRL PETITIONS FCC TO INCORPORATE PARITY ACT PROVISIONS INTO ITS AMATEUR RADIO RULES

The ARRL has filed a *Petition for Rulemaking* (*PRM*) asking the FCC to amend its Part 97 Amateur Service rules to incorporate the provisions of the Amateur Radio Parity Act. The *Petition* has not yet been assigned a rule making (RM) number and is not yet open for public comment. In the past, the FCC has said that it would not take such action without guidance from the US Congress, but, as ARRL's *Petition* notes, Congress "has overwhelmingly and consistently" offered bipartisan support for the Amateur Radio Parity Act.

"Private land use regulations which either prohibit or which do not accommodate the installation and maintenance of an effective outdoor antenna in residences of Amateur Service licensees are unquestionably the most significant and damaging impediments to Amateur Radio Service communications that exist now," ARRL said in its *Petition*. "They are already precluding opportunities for young people to become active in the avocation and to conduct technical self-training and participate in STEM [science, technology, engineering, and mathematics] learning activities inherent in an active, experiential learning environment. Without the relief in this *Petition*, the future of Amateur Radio is bleak indeed." The proposed amendments would have no effect on the FCC's limited preemption policy in §97.15(b), which pertains to state and municipal governing bodies, ARRL said.

Specifically, ARRL is proposing that the FCC amend Part 97 by adding a new subsection under §97.15 that prohibits and ceases the enforcement of "any private land use restriction, including

restrictive covenants and regulations imposed by a community association," that either fails to permit a licensee to install and maintain an effective outdoor antenna capable of operation on all Amateur Radio frequency bands; on property under the exclusive use or control of the licensee; precludes or fails to permit Amateur Service communications, or which does not constitute the minimum practicable restriction on such communications to accomplish the lawful purposes specifically articulated in the declaration of covenants of a community association seeking to enforce such restriction. ARRL's proposed rule would not affect any existing antenna approved or installed before the effective date of a *Report and Order* resulting from ARRL's petition.

The proposed provisions reflect the accommodation reached in the ultimate version of the Parity Act bill at the urging of federal lawmakers between ARRL and the Community Associations Institute (CAI), the only organization representing homeowners' associations. "That legislation was passed unanimously by the House of Representatives four separate times and has the support of the Senate Commerce Committee and the current Administration," ARRL stressed.

"Private land use regulations are not 'contracts' in the sense that there is any meeting of the minds between the buyer and seller of land," ARRL said. "Rather, they are simply restrictions on the use of owned land, imposed by the developer of a subdivision... They bind all lots in the subdivision." ARRL noted in its *Petition* that an increasing number of homes available for purchase today are already subject to restrictive covenants prohibiting outdoor antennas.

In addition, ARRL pointed out that the Telecommunications Act of 1996 gives the FCC jurisdiction "to preempt private land use regulations that conflict with federal policy..."

"It is now time for actual and functional parity in the Commission's regulations in order to protect the strong federal interest in Amateur Radio communications," ARRL said. Read more.

ARRL'S LOGBOOK OF THE WORLD TOPS 1 BILLION QSO RECORDS

As of December 19, more than 1 billion contact records have been entered into ARRL's Logbook of The World (LoTW) system. And, while 1 billion QSO records represents a significant milestone, a more important statistic may be the nearly 187 million contacts confirmed via LoTW over its 15-year history.

The one billionth record was uploaded by 7X3WPL, the Sahara DX Radio Club, at 2332 UTC for a 20-meter SSB contact with with Davide Cler, IW1DQS, that took place on December 28, 2016. The upload resulted in a match (QSL).

LoTW debuted in 2003 after a lot of behind-the-scenes planning and development. Initially, LoTW got off to a slow start. While user numbers gradually grew to about 5,000, a lot of hams didn't fully understand what LoTW was or how it worked, and opening an account could be cumbersome.

LoTW continued with few major changes until October 2011, when a perfect storm struck -- a large ingestion of logs after the CQ World Wide DX Contest and a freak snowstorm that knocked out power for more than a week in most places.

Field Services and Radiosport Department Manager Norm Fusaro, W3IZ, said uninterruptible power source (UPS) backup power quickly depleted in the days-long power outage. "When the system came back online, it was overwhelmed with the amount of data coming in and could not keep up," Fusaro said. "The water was coming in faster than the pumps could pump it out. *Crash!*"

The disaster was a blessing in disguise, though, because it revealed weaknesses in the LoTW software and hardware.

Fusaro said the League spent tens of thousands of dollars for new hardware. IT Manager Mike Keane, K1MK, implemented code changes to expedite log processing by giving priority to small- to medium-sized logs and inserting mega-files as openings occurred. Fusaro said a lot of the large files contained duplicate data, bogging down the process so much that users were resending logs already in the queue. Through all of this, not one QSO record was lost, because LoTW uses a redundant backup process, Fusaro said.

A LoTW users' group reflector and a queue-processing status page were set up. With better communication, Fusaro said, the system attracted additional numbers. Today, LoTW boasts some 112,000 users in all 340 DXCC entities, and 75% of all DXCC applications are filed via LoTW, which accounts for 86% of confirmations applied.

Now, ARRL is looking at the development of LoTW 2.0, Fusaro said. "Over the years, we have added more awards that can be applied for using LoTW QSL credits: VUCC, Triple Play, and two CQ awards -- WPX and WAZ."

"The service still has room for a lot of improvement, but it continues to grow and is the preferred method of confirming QSOs because it strives to protect the integrity of DXCC and all awards," Fusaro said. --ARRL

NEW AMATEUR RADIO PACKET GEAR AWAITS UNPACKING, INSTALLATION ON SPACE STATION

New Amateur Radio on the International Space Station (ARISS) packet equipment awaits unpacking and installation on board the station after arriving in November as part of the cargo transported via a Russian 71P *Progress* resupply vehicle. The new packet module for NA1SS will replace the current packet gear, which has been intermittent over the past year.

"With the arrival of *Progress* complete, the crew has to find free time to unpack *Progress*, uninstall the intermittent module, and then set up and test the replacement packet module," explained Dan Barstow, KA1ARD, senior education manager of the ISS National Laboratory (CASIS), an ARISS sponsor.

The ISS packet system was reported to have gone down in July 2017, although it unexpectedly came back to life the following summer. At the time of the failure, NASA ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO, said the revived system would fill the gap until the replacement packet module arrived. The packet system operates on 145.825 MHz. ARISS hardware team members on the ground were able to locate a functional duplicate of the ISS packet module that has been in use on the ISS for 17 years. ARISS said the subsequent installation will depend on the crew's busy schedule.

In an email to ARISS and other groups CASIS supports, Barstow pointed out that ARISS is an official backup system for astronauts to talk with Mission Control in the unlikely failure of the station's primary communication systems.

Bartow said that in 2017, hams relayed nearly 89,000 packet messages via the ISS -- an average of 243 every day. The statistic so intrigued and amazed Barstow that he decided to get his Amateur Radio license and gear to join in the activity.

Satellite stalwart and ARISS supporter Patrick Stoddard, WD9EWK, won the December 2018 *QST* Cover Plaque Award for his article, "Making Digital Contacts through the ISS."

Current International Space Station (ISS) crew members Serena Auñón-Chancellor, KG5TMT,

Alexander Gerst, KF5ONO, and cosmonaut Sergey Prokopyev were scheduled to return to Earth on December 20. --ARRL Letter

FOX-1CLIFF/AO-95 SUFFERS APPARENT RECEIVER FAILURE

The receiver on the newly launched Fox-1Cliff/AO-95 CubeSat seems to have suffered a receiver failure that could render the satellite unusable, AMSAT said over the weekend. Efforts continue by AMSAT Engineering to establish the cause of the problem and determine if a fix is possible. AMSAT Vice President-Engineering Jerry Buxton, N0JY, reported over the weekend that the issue cropped up during efforts to commission Fox-1Cliff/AO-95.

"After a few days of tests, analysis, and discussion, it appears that Fox-1Cliff/AO-95 will not be commissioned as our fourth Fox-1 Amateur Radio satellite," Buxton said. Commissioning began on December 4, right after the CubeSat's successful launch a day earlier.

"AMSAT Engineering will continue to evaluate and test Fox-1Cliff/AO-95 for solutions to the anomaly, and your continued help in providing telemetry is appreciated so that we can have data throughout her daily orbits, rather than limited data over our US stations," Buxton said. "The data, analysis, and testing could lead to a positive solution, but at the very least will be important to AMSAT's satellite programs in providing information that would help us and others avoid similar situations with future missions."

In a post to AMSAT-BB, Buxton mentioned one suggestion of employing a high-power station to see if AO-95 could hear its signal, but he added that AMSAT Engineering would not be offering a blow-by-blow narrative of its efforts to restore the satellite to operating condition, "unless it is something of merit or actionable."

Buxton noted that AMSAT's resources are limited, and all involved are volunteers. "Most -- if not all -- of our remaining Fox-1 engineers are also involved in the GOLF-TEE project, so I have asked them to give that first priority with their available volunteer time in order to keep the schedule," Buxton said. "AO-95 is in orbit now, and we can vary the amount of attention on her as resources allow in order to achieve both goals. If the results of our investigation point to a possibility of recovery, be it partial, full, or some workaround method, we would all like to see her working as much as the rest of you, and that is a driver for this investigation."

Buxton said he anticipates that AMSAT Engineering will continue to seek the cause of the apparent receiver failure, "until we have results or reach a dead end, because of the inability to take the lid off and look inside AO-95."

"I will certainly be keeping everyone posted when we have something new to report," Buxton said. --ARRL Letter

FIRST FT8 ROUNDUP IS A HUGE HIT

The first FT8 Roundup over the December 1 - 2 weekend attracted some 1,300 logs from those taking advantage of the ever-more-popular digital protocol. This, despite its having been announced on fairly short notice and with other events such as the ARRL 160-Meter Contest on the same weekend. More than 400 of the logs were from US radio amateurs in the 48 contiguous states, plus the District of Columbia. Overall, some 131,200 contacts were recorded. Participants from 91 countries submitted logs, testifying to the fact that FT8 is not just a US phenomenon.

"The FT8 Roundup was the last shakedown for the *WSJT-X* 2.0-rc5 beta software," said well-

known RTTY contesting enthusiast and expert Don Hill, AA5AU, an FT8 cosponsor with Ed Muns, W0YK. "It performed with no major complications." The general availability release of *WSJT-X 2.0* is now out, and it's not backward compatible with *WSJT-X* 1.9 or earlier versions. Developer Joe Taylor, K1JT, has urged users to upgrade by January 1 to what now is the new world standard. Muns, who's *NCJ* "Digital Contesting" contributing editor, said FT8 Roundup participation compared favorably with that for the ARRL RTTY Roundup, which has averaged around 1,700 logs in recent years.

"Don and I expected the contest to be popular," Muns said, "but the participation far exceeded our expectations. I think it bodes well for future FT8 contesting. Don and I are pretty bullish about continuing the FT8 Roundup on the first full weekend of December each year." Nonetheless, Muns said he doesn't see FT8 to "really take off" and displace RTTY until the contact rate can be significantly increased through parallel QSO techniques.

Hill agreed on the event's popularity. "I have to say it was a huge success," he said. "Ed and I never dreamed it would be this popular. It didn't make sense to continue the Ten-Meter RTTY Contest during this part of the sunspot cycle. Replacing it with an all-FT8 HF contest was the logical choice." Hill and Muns have cosponsored the Ten-Meter RTTY Contest.

Hill said final results of the inaugural FT8 Roundup should be out in a few days. "After the New Year, we hope to have downloadable online certificates available to all participants. We will definitely do it again next year," he said.

The 2019 ARRL RTTY Roundup will permit the use of FT8. --ARRL Letter

HAMVENTION SEEKS 2019 AWARD NOMINEES

Hamvention® is soliciting nominees for its 2019 awards -- Amateur of the Year, Technical Achievement, Special Achievement, and Club of the Year. Since the inception of the Hamvention awards program in 1955, many radio amateurs have been honored for their dedication and selfless contributions to Amateur Radio and to society.

- The Amateur of the Year Award recognizes a radio amateur who demonstrates a long-term commitment to the advancement of Amateur Radio, a history of contributions to ham radio, and a dedication to service and professionalism.
- The Technical Achievement Award honors a radio amateur who has achieved technical excellence in the world of Amateur Radio through inventions, processes, discoveries, experiments, and technical accomplishments, or through other outstanding technical achievement that has contributed to Amateur Radio.
- The Special Achievement Award goes to a radio amateur who has made an outstanding contribution to the advancement of the radio art and/or science. This award typically recognizes a radio amateur who has spearheaded a single significant project.
- The Club of the Year will be honored for clearly demonstrating its involvement in varied aspects of Amateur Radio for the greater good of their community or the nation.

Nomination forms for each award are available online and should include the information requested. The individual(s) making the nomination should provide contact information in case questions arise.

Submit nominations via email or via USPS mail to Hamvention Awards Committee, Box 964, Dayton, OH 45401-0964.

The nomination deadline is February 15. The Awards Committee will announce the award

recipient after reviewing the nominations. An honors convocation will be held on the Saturday evening of Hamvention weekend, and presentations to award winners will take place on Sunday afternoon, prior to the door prize awards.

Contact the Awards Committee for more information. -- *Thanks to Mike Kalter, W8CI, and Frank J. Beafore, WS8B*

BROADCASTERS INTRUDING ON EXCLUSIVE AMATEUR RADIO FREQUENCIES

The International Amateur Radio Union Region 1 (IARU-R1) Monitoring System (IARUMS) reports that Radio Hargeisa in Somaliland has returned to 7,120 kHz after a break of several weeks, while Radio Eritrea has been reported on 7,140 and 7,180 kHz. Radio Sudan has been transmitting on 7,205 kHz with excessive splatter, IARUMS said. German telecommunications authorities have filed official complaints.

IARUMS has also reported digital signals attributed to the Israeli Navy on 7,107 and 7,150 kHz. In addition, a Russian military F1B signal was observed in mid-November on 7,179 kHz. A Russian over-the-horizon radar has returned to 20 meters on 14,335 - 14,348 kHz. It was monitored on November 22.

Earlier this fall, IARUMS reported digital signals from the Polish military daily on 7,001.8 kHz where Amateur Radio has a worldwide primary allocation. Telecommunications officials in Germany filed a complaint.

IARUMS has received reports of short "beeps" exactly 1 second apart, as well as frequency hopping between 10,108 and 10,115 kHz and 18,834 and 18,899 kHz. The signals are believed to emanate from a site near Chicago associated with an FCC-licensed experimental operation involved with low-latency exchange trading on HF (see "Experiments Look to Leverage Low-Latency HF to Shave Microseconds off Trade Times"). Although Amateur Radio is secondary on 30 and 17 meters, Experimental licenses may not interfere with Amateur Radio operations. --ARRL Letter

NORTH AMERICAN COLLEGIATE CHAMPIONSHIP ADDS NAQP RTTY FOR 2019

In something new for 2019, the Society of Midwest Contesters (SMC) has announced an expansion of the North American Collegiate Championship (NACC), which takes place in conjunction with the North American QSO Party (NAQP). The inaugural event this past January only covered the NAQP SSB event. In 2019, the NACC will also cover the NAQP RTTY event. *NCJ* (*National Contest Journal*) sponsors the NAQP. The NAQP SSB runs from 1800 UTC on January 19 to 0600 UTC on January 20, 2019. The NAQP RTTY runs 1800 UTC on February 23 to 0600 UTC on February 24. The NACC format is generally the same as those for the NAQP, but there are some differences.

"This is an opportunity for your college club station to compete with any college and university in North America," the SMC said in announcing the 2019 running of the NACC. "You can take on your state or conference rivals. With planning and practice, it is possible to win a national championship." NACC stations can follow the action on a real-time online scoreboard. Participants must register college/university and call sign. Once registered, stations will receive instructions on how to set up, which includes inserting and activating a link in the participating stations contest logging software.

Collegiate stations will use their college club call signs, and the station must be located on the school's physical campus. The NAQPs impose a 100 W power limit. All operators must be

enrolled students and club members. As of November 14, 15 collegiate station were registered.

The exchange for the NAQPs is your name and ARRL/RAC section, and participants may use any name associated with the school, which must remain the same for the entire event.

The College Contest Class will be multioperator, single radio, M/1. Stations may use assistance similar to the M2 class and will submit logs in the M2 class via the NAQP log submission page. *NCJ* will publish college stations in their own class. Awards will be based on the adjudicated logs and not the online finish. Participants may operate the entire 12 hours of the contest.

Awards will be given out for National Champion, Runner-up, and State Champions. Awards will be sponsored by SMC, *NCJ*, and Icom.

For more information, contact Craig Thompson, K9CT. --ARRL Letter

FCC TELLS LED SIGN MARKETERS TO ABIDE BY STATUTES AND RULES

The FCC Enforcement Bureau has called on marketers of light-emitting diode (LED) signs to ensure that these lights comply with FCC rules. Since March of this year, the agency has entered into 21 settlement agreements with companies that marketed noncompliant LED signs in violation of the Communications Act and FCC rules. The settlements yielded approximately $850,000 in penalties, and commitments to ensure compliance with the law going forward.

Adherence to the FCC's equipment authorization and marketing rules is critical because radio frequency emissions from the signs may cause harmful interference to licensed communications, such as wireless services, the FCC said.

"In light of these recent settlements, we remind LED sign marketers of their obligations under the law," said Enforcement Bureau Chief Rosemary Harold. "The FCC takes seriously its responsibility in ensuring that energy-emitting devices like LED lights do not interfere with authorized transmissions."

LED lights are often used in digital billboards and other commercial and industrial applications, including billboards and large video displays in sports arenas. Given the electrical design of these lights, they may emit RF energy. Prior to being marketed in the US, LED sign models must be tested and comply with FCC technical standards and must include the proper labeling, identification, and user information disclosures. The FCC Office of Engineering and Technology (OET) oversees the equipment authorization process for RF devices, including LED signs.

The Enforcement Bureau investigated hundreds of indoor and outdoor LED sign models and discovered repeated FCC rule violations concerning the failure to market the models with the required equipment authorizations, labeling, and user information disclosures. Read more. --ARRL

NEW TWO-HAM ISS CREW LAUNCHED TO ISS IS THE FIRST SINCE ABORTED OCTOBER FLIGHT

Three astronauts -- including two radio amateurs -- have docked at the International Space Station (ISS) on the first crewed *Soyuz* vehicle launch since a dramatic failure in October. The astronauts, from the US, Canada, and Russia, left Kazakhstan at 1130 UTC on December 3, and the Russian space agency Roscomos confirmed their successful docking at the station. On board were David Saint-Jacques, KG5FYI, a Canadian engineer, astrophysicist, and medical doctor; space veteran Oleg Kononenko, RN3DX, of Russia, and Anne McClain, of the US.

Investigators have blamed a faulty sensor, said to have been damaged during assembly in Kazakhstan. Crew commander Kononenko said his crew recognized the risks of spaceflight as part of their profession and expressed confidence in the flight preparation.

The three-person crew's mission was originally set for later this month, but officials moved up the date to avoid leaving the space station unstaffed, when the current ISS crew of cosmonaut Sergey Prokopyev and astronauts Serena Auñón-Chancellor, KG5TMT, and Alexander Gerst, KF5ONO, return to Earth on December 20.

Meanwhile, NASA astronaut Nick Hague, KG5TMV, who was on the aborted October 11 *Soyuz* launch, is getting ready for another try. Hague, NASA astronaut Christina Hammock Koch, and cosmonaut Alexey Ovchinin are scheduled to launch from Baikonur Cosmodrome on February 28 aboard the Russian *Soyuz* MS-12 spacecraft.

The trio will join the ISS Expedition 58 crew that just went up, and they will return to Earth in October 2019 as members of Expedition 60. Hague and Koch will serve as flight engineers for Expeditions 59 and 60. Ovchinin will serve as a flight engineer on Expedition 59 and as the commander of Expedition 60.

This will be Koch's first spaceflight. Hague and Ovchinin were on their way to join the station's Expedition 57 crew on October 11, when their *Soyuz*'s rocket booster experienced a malfunction shortly after launch, aborting the mission. Both returned safely to Earth. The MS-10 flight abort marked the first Russian human spaceflight booster accident in 35 years.

Investigators looking into the October 11 incident said afterward that other *Soyuz* vehicles may have been similarly defective, but pointed out that additional pre-flight checks had been introduced. NASA offered its own reassurances about continued cooperation with and confidence in the Russian space program. --ARRL Letter

FCC REACHES $900,000 SETTLEMENT IN UNAUTHORIZED SATELLITE LAUNCH CASE

The FCC has settled an investigation into an alleged unauthorized launch and operation of small satellites by Swarm Technologies. The company agreed to a ***Consent Decree*** that included a $900,000 penalty, an extended period of FCC oversight, and a requirement of pre-launch notices to the FCC, among other stipulations.

“We will aggressively enforce the FCC’s requirements that companies seek FCC authorization prior to deploying and operating communications satellites and earth stations,” FCC Enforcement Bureau Chief Rosemary Harold said. “These important obligations protect other operators against radio interference and collisions, making space a safer place to operate.”

In April 2017, Swarm applied for an Experimental license to deploy and operate two Earth stations and four tiny 0.25 U CubeSats called SpaceBEEs. The FCC denied Swarm’s application in December 2017 over concerns about the ability to track the satellites. Swarm nevertheless **launched the satellites** on January 12, 2018, on a vehicle that also carried an Amateur Radio satellite into space. After reports of the unauthorized SpaceBEEs launch surfaced, the FCC launched an investigation last March.

The FCC determined that Swarm had launched the four SpaceBEEs from India and had unlawfully transmitted signals between Earth stations in Georgia and the satellites for more than a week. In addition, the FCC discovered that Swarm had also performed unauthorized weather balloon-to-ground station tests and other unauthorized equipment tests prior to the launch. All these activities required FCC authorization.

The December resolution requires Swarm to pay a penalty $900,000 to the US Treasury and to submit pre-launch reports to the FCC for the next 3 years. The FCC said Swarm has committed to a strict compliance plan to prevent future FCC rule violations.

The FCC issued an ***Enforcement Advisory*** last April to remind satellite operators that they must obtain FCC authorization for space station and Earth station operations. The advisory cautioned satellite operators and launch companies against proceeding with launch arrangements following a license denial or prior to receiving an FCC authorization.

SHORTS

There will be (in 2019) a Canadian version of 2016's ARRL NPOTA event." Canadian National Parks on the Air (CNPOTA) occurs during the calendar year of 2019. Rules are posted on the website.

The 2018 ARRL International Grid Chase (IGC) certificates page is now live. As IGC competitions are monthly, people can start generating monthly certificates to display. At year's end, IGC will have the option to generate a certificate based on year-end tallies. For now, participants can select a month, then select up to 16 band/mode certificates they'd like to create. Participants with more than 16 band/mode activities can choose to generate two certificates to encompass the excess (i.e., more than 16 lines), or can just generate certain band certificates, or just certain mode certificates -- even just one band/mode if desired. This is a work in progress. Give it a try! Feedback is welcome. -- *Thanks to ARRL Contest Branch Manager Bart Jahnke, W9JJ*

Registration is open for 2019 Contest University (CTU), Thursday, May 16, 2019, at the Crowne Plaza in downtown Dayton, Ohio. This is the day before Hamvention® opens in Xenia. More than 7,500 students have attended CTU sessions over the last 13 years in eight countries, and more than 100 CTU professors have shared their contesting experiences. The faculty lineup is posted on the CTU website and includes several new and returning members. Newcomer Bryant, KG5HVO, will present ideas for attracting youth into contesting, while Dan, N6MJ, and Chris, KL9A -- the gold medalists at WRTC 2014 -- will present advanced operating papers. Not teaching, but on hand to field questions will be CTU stalwart Frank, W3LPL. The 2019 CTU Dayton course outline will be posted soon. Scholarships (paid registration) are available for CTU attendees through a grant from the Northern California DX Foundation (NCDXF) for students age 25 and younger. Click the "Contact Us" tab on the CTU website. CTU Dayton 2019 registration information is on the CTU website. Prospective attendees who have given or will give a talk about Amateur Radio to any club, hamfest, or other group since May 16, 2018, qualify for a $10 registration discount. Choose the "Registration with Club Talk Discount" option. **--ARRL Letter**

ExseedSat has been designated as VO-96. At the request of Exseed Space, AMSAT has designated the 1U *ExseedSat* CubeSat, launched on December 3 on a Falcon 9 vehicle from Vandenberg Air Force Base in California, as VUsat-OSCAR 96 (VO-96). *ExseedSat* was built by a team of Indian radio amateurs, including Ashhar Farhan, VU2ESE; George Philips, VU2GT; Gurudatta Panda, VU3GDP; Sasi Bhushan, VU3ELR, and Nitin Muttin, VU3TYG. Initial telemetry has been received around the world. The downlink is 145.900 MHz for the FM repeater (CTCSS = 67 Hz) and digipeater, plus telemetry, and 435.340 MHz for FM repeater and digipeater uplink. Visit the IARU Satellite Frequency Coordination page for more information. -- *Thanks to Drew Glasbrenner, KO4MA, AMSAT VP Operations/OSCAR Number Administrator*

Jordan's first CubeSat, JY1Sat, is now JO-97. JY1Sat, launched on December 3 from

Vandenberg Air Force Base in California as part of the SpaceX SSO-A: SmallSat Express launch, has been designated as Jordan OSCAR 97 (JO-97). The 1U CubeSat is a project of the Crown Prince Foundation of Jordan. Telemetry has been received and decoded around the world since the launch. The spacecraft's name recalls the Amateur Radio call sign of Jordan's late King Hussein, JY1. JO-97 carries a 435/145 MHz SSB/CW inverting Amateur Radio transponder and a Slow-Scan Digital Video (SSDV) system to transmit stored images. The telemetry downlink is on 145.840 MHz, the transponder downlink passband is 145.855 - 145.875 MHz, with an inverting uplink on 435.100 - 435.120 MHz. -- *Thanks to AMSAT*

The Successful Ham Radio Operator's Handbook – This new book is aimed at new or returning hams, to help them understand the practical aspects of the hobby, how to use their radios, build antennas and baluns, and get on the air successfully. In it you will find explanations of how the various parts of your ham radio - the transmitter and receiver – work, plus how these are being implemented using software defined radio technology. Operating techniques for VHF/UHF repeaters, HF radio DXing techniques, and the new digital modes are covered. Radio propagation, antennas, transmission lines, SWR and the mysteries of baluns are explained. Building your HF station, choosing a radio, connecting your radio to a computer, and mobile and portable operation are extensively covered.

Both the pdf and spiral-bound printed versions are available from Lulu.com, and the print copy is also sold by DX Engineering. You can find them via the links below:

http://www.ke7x.com/successful/ordering-the-successful-ham-radio-operator-s-handbook

Here is a link that describes the book in more detail:

http://www.ke7x.com/successful

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THANKS FOR READING. HAPPY NEW YEAR !

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